IN THE SPECIFICATION:

Please amend the paragraph beginning at page 1, line 5 and ending at line 8, as follows.

--The present invention relates to a transfer member and an image forming apparatus, ~~using the transfer member,~~ such as a printer, a copying machine or a facsimile apparatus, using the transfer member.

Please amend the paragraph beginning at page 1, line 11 and ending at line 23, as follows.

--Referring to Figure 7, inside a main assembly of the image forming apparatus, an endless-foam intermediary transfer belt 7 moving in a direction of an arrow R7 is disposed. The intermediary transfer belt 7 is constituted by a film of an electroconductive or dielectric resin, such as polycarbonate, polyethylene terephthalate resin or polyvinylidene fluoride. A recording material P such as paper supplied from a paper(-feeding) cassette 11 is fed to a secondary transfer portion (secondary transfer nip portion) via ~~regist-~~ register rollers 14 and is further conveyed toward the left-hand side in the figure.--

Please amend the paragraph beginning at page 1, line 24 and ending at page 2, line 20, as follows.

--Above the intermediary transfer member 7, four image forming units Pa, Pb, Pc and Pd each having a substantially identical structure are disposed in series. The structure of the image forming units will be described by taking the image forming unit Pa as an example.

The image forming unit Pa includes a photosensitive drum 1a which is disposed rotatably in a direction of an arrow. Around the photosensitive drum la, process equipments such as a primary charger 2a, an exposure apparatus 3a, a developing apparatus 4a, a primary transfer roller ~~resistivity~~ (primary transfer member) 5a, and a cleaning apparatus 6a are disposed. Similarly as in the image forming unit Pa, other image forming units Pb, Pc and Pd also include: primary chargers 2b, 2c and 2d; exposure apparatuses 3b, 3c and 3d; developing apparatuses 4b, 4c and 4d; primary transfer rollers (primary transfer members) 5b, 5c and 5d; and cleaning apparatuses ~~apparatus~~ 6b, 6c and 6d. These image forming units Pa, Pb, Pc and Pd form color toner images of magenta, cyan, yellow and black, respectively, in this order, and the respective developing apparatuses 4a, 4b, 4c and 4d contain the respective color toners of magenta, cyan, yellow and black.--

Please amend the paragraph beginning at page 5, line 12 and ending at line 26, as follows.

--Representative means for adjusting a resistance of the transfer roller includes one of electron-conductive type and ~~one of~~ ion-conductive type. The former (electron-conductive type) comprises a rubber and electroconductive particles, dispersed in the rubber, such as electronconductive carbon black, metal powder or metal oxide particles. On the other hand, the latter (ion-conductive type) comprises a rubber and an ion-conductive material, kneaded in the rubber, such as epichlorohydrin rubber; tetracyanoethylene and its derivatives; benzoquinone and its derivatives; inorganic ion substances including lithium perchlorate, sodium perchlorate and calcium perchlorate; cationic surfactants; and amphoteric surfactants.--

Please amend the paragraph beginning at page 6, line 2 and ending at line 12, as follows.

--The electroconductive type transfer roller exhibits a voltage characteristic as shown in figure 8. As apparent from Figure 8, when a voltage applied to the transfer roller is increased, the resultant volume resistivity is lowered. For this reason, when a voltage exceeding a certain voltage is applied, the transfer roller causes leakage in some cases. Further, an irregularity in resistivity due to nonuniform ~~ununiform~~ dispersion of an electron conductive agent in a rubber becomes large when compared with the case of the ion-conductive type transfer roller.--

Please amend the paragraph beginning at page 7, line 15 and ending at line 27, as follows.

--In these circumstances, as a measure ~~measures~~ against the polarization of the ion-conductive substance, Japanese Laid-Open Patent Application (JP-A) Hei 7-49604 discloses an improved ~~improving~~ method wherein a bipolar bias voltage is applied to a transfer roller at a certain interval. Further, JP-A Hei 11-65269 describes ~~measures such~~ that epichlorohydrin rubber (ECO) is mixed in nitrile-butadiene rubber (NBR) in order to remedy a difficulty of NBR being liable to deteriorate due to ozone by the presence of a double bond in its main chain. However, these documents fail to describe measures against discharge of a foamed layer.--

Please amend the paragraph beginning at page 9, line 19 and ending at line 23, as follows.

--An object of the present invention is to provide a charging member or a transfer member capable of suppressing a change in resistance by continuous use and providing a stable transferability for a long period of time ~~term~~.--

Please amend the paragraph beginning at page 10, line 19 and ending at line 20, as follows.

--According to the present invention, there is also provided an image forming apparatus, comprising:--

Please amend the paragraph beginning at page 13, line 22 and ending at line 27, as follows.

--Hereinbelow ~~Hereineblow~~, preferred embodiments of the present invention will be described with reference to the drawings. In the respective drawings, identical reference numerals or symbols represent identical members or functions ~~unctions~~, and repeated explanation therefore will be omitted appropriately.--

Please amend the paragraph beginning at page 15, line 2 and ending at line 22, as follows.

--Above the intermediary transfer member 7, four image forming units Pa, Pb, Pc and Pd each having a substantially identical structure are disposed in this order from an

upstream side of the rotation direction (the arrow R7 direction) of the intermediary transfer belt 7. The respective image forming units Pa, Pb, Pc and Pd include drum-type electrophotographic photosensitive members (referred to as "photosensitive drums") 1a, 1b, 1c and 1d, as image bearing members, which are disposed rotatably in a direction of an arrow. Around the respective photosensitive drums 1a, 1b, 1c and 1d, process equipments such as primary charges (charging means) 2a, 2b, 2c and 2d, exposure apparatuses (exposure means) 3a, 3b, 3c and 3d, developing apparatuses (developing means) 4a, 4b, 4c and 4d, primary transfer rollers (transfer members) 5a, 5b, 5c and 5d, and cleaning apparatuses (cleaning means) 6a, 6b, 6c and 6d are disposed substantially in this order along the rotation direction (counterclockwise direction in Figure 1) of the photosensitive drums.--

Please amend the paragraph beginning at page 16, line 2 and ending at page 17, line 13, as follows.

--The photosensitive drum 1a is rotationally driven in a direction of the arrow indicated therein by drive means (not shown), and the surface thereof is uniformly charged by the primary charger 2 to a predetermined polarity and a predetermined potential. On the surface of the photosensitive drum 1a after the charging, an electrostatic latent image is formed by the exposure apparatus 3a. Specifically, laser light which is ON/OFF-controlled in correspondence with an image signal based on a magenta component color of an original is emitted from a laser oscillator of the exposure apparatus 3 and is applied onto the photosensitive drum 1a through a polygon mirror (not shown) to form an electrostatic latent image at the surface of the photosensitive drum 1a by removal of electric charges at an irradiated portion of the laser light.

The electrostatic latent image is developed with the magenta toner supplied from the developing apparatus 4a as a magenta toner image. When the magenta toner image reaches a primary transfer portion T1 where the photosensitive drum 1a and the intermediary transfer belt 7 abut against each other by the rotation of the photosensitive drum 1a~~. At that time~~, the magenta toner image formed on the photosensitive drum 1a is primary-transferred onto the intermediary transfer belt 7 by applying a transfer bias voltage to ~~applied to~~ the primary transfer roller 5a. The residual toner remaining on the surface of the photosensitive drum 1a after the toner image transfer is removed by the cleaning apparatus 6a to be subjected to a subsequent image formation. The intermediary transfer belt 7 carrying thereon the magenta toner image is conveyed to the image forming unit Pb, where a cyan toner image which has been formed by that time on the photosensitive drum 1b through the same image forming process as in the magenta toner image described above is primary-transferred onto the magenta toner image in a superposition manner.--

Please amend the paragraph beginning at page 18, line 9 and ending at page 19, line 8, as follows.

--On the other hand, the recording material P after the secondary transfer of toner image is sent to a fixing apparatus 16, where the toner image is heated and pressed between a fixation roller 17 and a pressure roller 18. As a result, the toner image is fixed on the surface of [[o]] the recording material P. The fixing apparatus 16 includes a mechanism for coating a release oil (e.g., silicone oil) onto the surface of the fixation roller 17 in order to enhance a releasability between the recording material P and the fixation roller 17. This release oil is also attached to the recording material P. The recording material P on which the toner image is fixed

is discharged in a discharge tray (not shown). Incidentally, in the case of performing automatic double-sided image formation on the recording material P, the recording material P after being subjected to toner image fixation at its front side (first surface) is subjected to image formation also at its back side (second surface) by passing it through a recording material inversion passage (not shown) to effect both side-inversion and, after being sent again to the secondary transfer portion T2, by repeating the above-mentioned ~~cycle of~~ image forming process. The recording material P having the formed toner images on both sides thereof is discharged to ~~on~~ the discharge tray, thus completing four color-based full-color image formation.--

Please amend the paragraph beginning at page 19, line 14 and ending at line 21, as follows.

--Each secondary transfer roller 15 is constituted by a core metal 15a and a resistance layer 15b which cylindrically surrounds the core metal 15a. The transfer roller 15 has an outer diameter of 24 mm and a diameter of core metal 15a of 12 mm., ~~and includes the~~ The resistance layer 15b is formed ~~foamed~~ of a foamed rubber (foamed elastic member) principally comprising nitrile-butadiene rubber (NBR).--

Please amend the paragraph beginning at page 21, line 1 and ending at line 16, as follows.

--Referring to Figure 4, a transfer roller 15 is pressed against a metal roller 20 having a diameter of 30 mm while applying a total load of 1000 gf to both longitudinal ends of the ~~a~~ core metal 15a (500 gf per each longitudinal end). The metal roller 20 is rotated at a speed

of 20 rpm, whereby the transfer roller 15 is rotated. At that time, a bias voltage of 2 kV is applied from a power supply 21 to the core metal 15a, and a current value passing through the metal roller 20 is monitored by an ammeter 22. When a current value at that time is I(A) and the transfer roller 15 has a rubber layer length of L, a core metal diameter of r2 and a roller outer diameter of r1; a volume resistivity (ρv) of the transfer roller 15 is obtained according to the following equation:

$$\rho v = \{2\pi L \times 2000\}/\{I \times \underline{1}n(r1/r2)\}.$$--

Please amend the paragraph beginning at page 21, line 17 and ending at line 25, as follows.

--In the present invention, the volume resistivity of the transfer roller is not limited to the above range of $7x10^7$ - $1.2x10^8$ ohm.cm[[)]]. The volume resistivity of the transfer roller may vary depending on, e.g., an image forming speed (process speed) of the image forming apparatus used and a thickness of the resistance layer employed, and my preferably be in the range of $1.0x10^6$ - $1.0x10^{10}$ ohm.cm.--

Please amend the paragraph beginning at page 21, line 26 and ending at page 22, line 20, as follows.

--If the volume resistivity is below $1.0x10^6$ ohm.cm, a transfer current flows in a non-paper feeding portion, so that a resultant transfer voltage is not increased to result in an insufficient supply of electric charges to a paper-feeding portion. Further, a difference in supplied electric charge density between an image forming portion and a non-image forming

portion is caused to occur, so that a phenomenon such that a solid black image is scattered over a solid white portion is caused. On the other hand, when the volume resistivity exceeds $1.0x10^{10}$ ohm.cm, a transfer voltage with respect to a transfer current required for transfer becomes too high, so that an abnormal discharge image, such as a white-dropout image, is caused to occur in some cases. Further, discharge within the sponge rubber layer is liable to occur, thus accelerating an increase in resistance in continuous use (energization) in some cases. Accordingly, in order to obviate the above-mentioned difficulties, the volume resistivity may more preferably be in the range of $1.0x10^{7}$ - $1.0x10^{9}$ ohm.cm.--

Please amend the paragraph beginning at page 24, line 14 and ending at line 20, as follows.

--A cylindrical (doughnut-shaped) specimen C (foamed member or roller) having an inner diameter of 12 mm, an outer diameter of 24 mm and a height of 20 mm is prepared by removing the core metal (shaft) 15a from ~~rom~~ the transfer roller 15, and is subjected to density measurement by using the above-mentioned measuring equipment (M) in the manner described above.--

Please amend the paragraph beginning at page 25, line 12 and ending at line 25, as follows.

--A specimen (roller) C is prepared in the same manner as in the case of the surface bubble-containing density A described above. The thus prepared specimen C is subjected to removal of air bubbles at the roller surface in water, e.g., by compression ten times, after it is

sufficiently immersed in water. Thereafter, as shown in Figure 5(a), the specimen C (roller) is subjected to measurement of density in [[i]] a state wherein air bubbles at the roller surface are completely removed. The density measured in such a state is referred to as "surface bubble-deaerated density B". Incidentally, in the present invention, the manner of removing air bubbles from the roller surface is not limited to the compression.--

Please amend the paragraph beginning at page 26, line 6 and ending at line 9, as follows.

--Figure 9 shows evaluation results of 18 transfer rollers having different combinations ~~combination~~ of the surface bubble-containing density A and the surface bubble-dearated density B.--

Please amend the paragraph beginning at page 26, line 24 and ending at line 27, as follows.

--Referring again to Figure 9, the evaluation item ("increase in resistance after continuous energization") is indicated by "o" or "x" according to the following criterion.--

Please amend the paragraph beginning at page 27, line 17 and ending at line 25, as follows.

--The results of the table shown in Figure 9 are ~~is~~ also shown as a graph in Figure 3. From Figure 3, in order to suppress an increase in resistance after continuous

energization, it has been found that the surface bubble-containing density A (g/cm^3) and the surface bubble-deaerated density B (g/cm^3) are required to satisfy the following conditions:

$B \leq (5/3) \times A - 0.3$, and

$B \geq 0.6$.--

Please amend the paragraph beginning at page 29, line 13 and ending at page 30, line 12, as follows.

--With respect to backside contamination, in this embodiment, particular cleaning means for cleaning the secondary transfer roller 15 is not employed from the viewpoints of cost reduction and space saving. However, the backside contamination is prevented by applying a transfer bias voltage to the secondary transfer roller 15 at the time when the recording material P is not present at the secondary transfer portion, thereby to remove the toner particles attached to the surface of the transfer roller 15. In this case, a degree of the backside contamination becomes worse if a difference between the surface bubble-deaerated density B and the surface bubble-containing density A (i.e., B-A) is less than 0.02 g/cm^3. This is because the smaller difference ($B-A < 0.02$ g/cm^3) means such a state that an amount of foaming portion at the roller surface is smaller, i.e., a state such that the surface <u>of</u> [[o]] the secondary transfer roller 15 becomes smoother, so that toner particles cannot enter the foaming portion at the surface of the secondary transfer roller 15 to be always present at the roller surface, thus being liable to stay at the roller surface with respect to a component of toner particles which cannot be removed even by applying the transfer bias voltage described above, thereby to be liable to cause the backside contamination.--

Please amend the paragraph beginning at page 31, line 6 and ending at line 12, as follows.

--In this embodiment, comparison was made with respect to a plurality of transfer rollers having different thicknesses ~~thickness~~ of the transfer roller (of resistance layer exclusive of the core metal) and different diameters of the core metal in addition to different combinations of the surface bubble-containing density A and the surface bubble-deaerated density B.--

Please amend the paragraph beginning at page 31, line 22 and ending at line 22, as follows.

--The evaluation results are ~~ar~~ shown in Figure 10.--

Please amend the paragraph beginning at page 32, line 9 and ending at page 33, line 15, as follows.

--As shown in Figure 10, if the relationships between the surface bubble-containing density A and the surface bubble-deaerated density B described in Embodiment 1 were satisfied, it was possible to achieve the objective, i.e., acceptable level (o), in terms of resistance increase after continuous energization. However, with respect to the crack at the roller surface, when the resistance layer thickness was not more than 3 mm, the crack occurred very noticeably (x) ~~(o)~~, and when the thickness was 4 mm, the crack occurred noticeably (Δ). On the other hand, when the thickness was 4.5 - 5.5 mm, a slight crack occurred but was at a practically acceptable level (oΔ), and when the thickness was not less than 6 mm, the crack did not occur

(o). If the crack is caused to occur, resultant performances in terms of not only an image forming characteristic but also conveyance characteristic of the recording material become worse. Accordingly, the thickness of the resistance layer may preferably be not less than 4.5 mm, and may more preferably be not less than 6 mm. However, in order to increase the resistance layer thickness, if the core metal diameter was made smaller, a slack was smaller (not more than 10 mm), a slack was caused to occur at a central portion of the transfer roller in its longitudinal direction, thus leading to an occurrence of such a phenomenon that the transfer roller causes transfer failure at its central portion. As shown in Figure 10, the slack was not caused to occur (o) when the core diameter was not less than 12 mm but was caused to occur somewhat and adversely affected resultant images (Δ) when the core diameter was 10 mm. Further, when the core diameter was not more than 8 mm, a large slack was caused to occur (x).--

Please amend the paragraph beginning at page 34, line 16 and ending at line 17, as follows.

--In each evaluation item ~~items~~, evaluation criteria are as follows:--

Please amend the paragraph beginning at page 34, line 22 and ending at line 27, as follows.

--It was confirmed that the transfer roller pressure did not adversely affect the change in resistance after continuous energization even when the pressure of the transfer roller (secondary transfer roller 15) to the intermediary transfer belt 7 was changed between 1.2×10^3 Pa (pascals) and ~~nd~~ 5.0×10^5 Pa.--

Please amend the paragraph beginning at page 36, line 13 and ending at line 14, as follows.

--Figure 6 shows a schematic structure of the ~~black~~ black-and-white image forming apparatus.--

Please amend the paragraph beginning at page 36, line 15 and ending at line 25, as follows.

--Referring to Figure 6, the image forming apparatus includes a drum-type electrophotographic photosensitive member (photosensitive drum) 31 as an image bearing member. Around the photosensitive member ~~roller~~ 31; a charge roller (charging means) 32, an exposure apparatus (exposure means) 33, a developing apparatus (developing means) 34, a transfer roller (transfer member) 35, and a cleaning apparatus (cleaning means) 36 are disposed substantially in this order along a rotation direction (of an arrow R31) of the photosensitive drum 31.--

Please amend the paragraph beginning at page 37, line 14 and ending at line 19, as follows.

--The recording paper P is nipped and conveyed at the transfer portion T. At that time, a transfer bias voltage is applied to a core metal 35a ~~35~~ of the transfer roller 35, whereby the toner image on the photosensitive drum 31 is transferred onto the recording material P.--

Please amend the paragraph beginning at page 37, line 20 and ending at line 27, as follows.

--The residual toner remaining on the surface of the photosensitive drum 31, i.e., ~~without being~~ not transferred onto the recording material P at the time of the toner image transfer, is removed by the cleaning apparatus 36. On the other hand, the toner image transferred onto the recording material P is fixed on the surface of the recording material P by a fixing apparatus (not shown).--